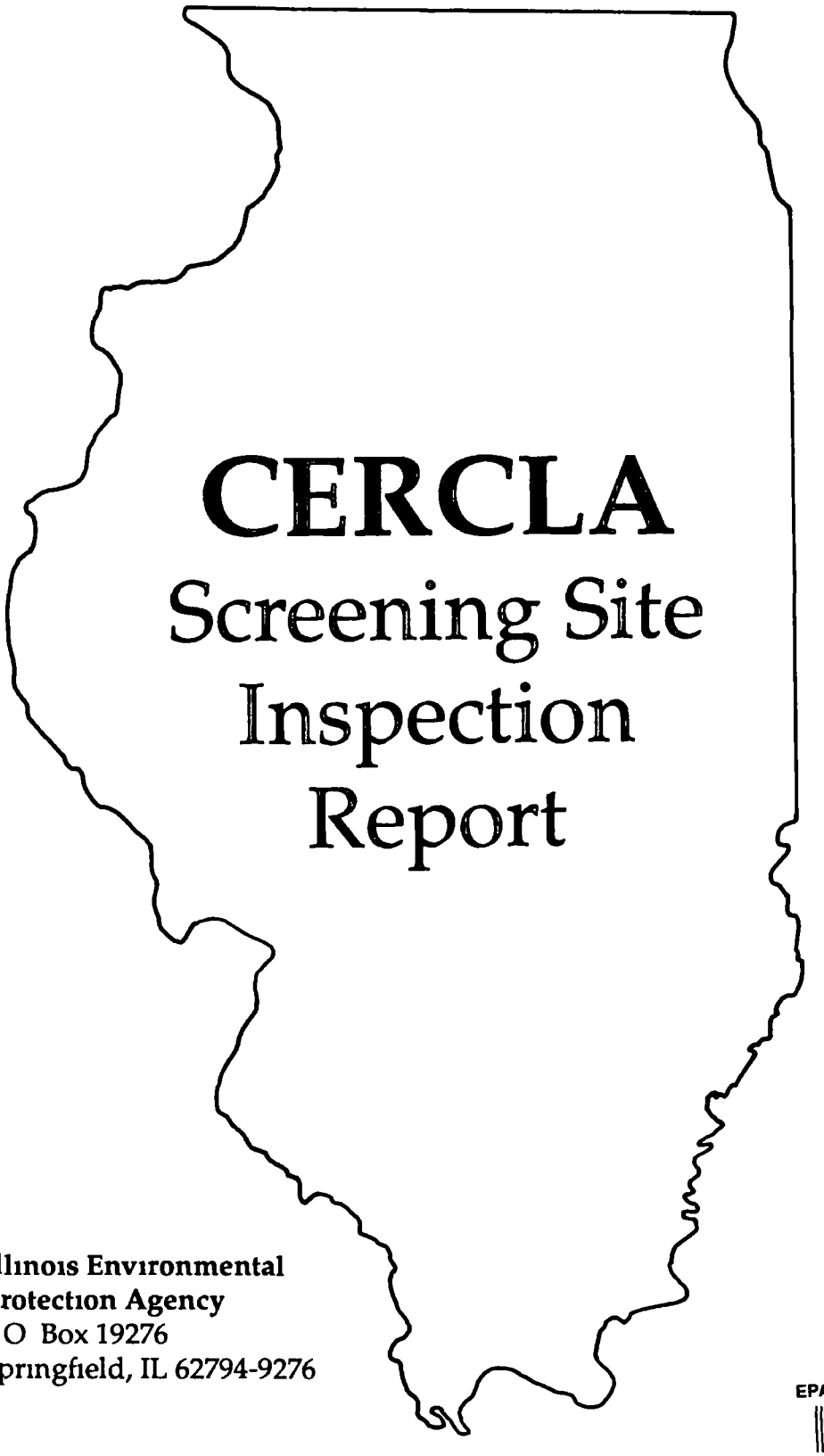
L0310965069--Cook Co
Joslyn Manufacturing Company
ILD077054708
HRS/SF

NFRAP - PA 2
A Altur
9/13/91

CERCLA
Screening Site Inspection Report



Illinois Environmental
Protection Agency
PO Box 19276
Springfield, IL 62794-9276

Confidential Material May be Enclosed

Joslyn Manufacturing Company

Site Screening Inspection
Site Remediation

On January 24, 1991 the Illinois Environmental Protection Agency's (IEPA) Pre-Remedial Unit was tasked by the United States Environmental Protection Agency (USEPA) to conduct a Screening Site Inspection (SSI) of the Joslyn Manufacturing Company (Joslyn) site in Franklin Park, Illinois

The site was initially discovered by the Illinois EPA and placed on the Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) on May 31, 1988 The site began undergoing environmental evaluation in 1986, however, it had not been placed onto CERCLIS until the 1988 date The site was evaluated in the form of a Preliminary Assessment (PA) that was submitted to USEPA, prepared by Timothy J Murphy of the IEPA, and is dated December 1, 1989 The IEPA's Pre-Remedial Unit conducted a site reconnaissance in January 1991 and prepared an SSI workplan for the Joslyn site which was submitted to USEPA Region V for approval A site safety plan was also prepared for the site Upon review of the workplan, the USEPA recommended that the site undergo an extensive desk audit/SSI This decision was based on information contained in the workplan that the site was not only being evaluated by the IEPA's Pre-Remedial Unit but also by the IEPA's Immediate

Removal/Voluntary Clean-up Section Numerous environmental samples were taken and various reports were written describing the site and type and extent of contamination The following is the result of the desk audit/SSI

The Joslyn Manufacturing Company was a wood treating facility which processed railroad ties and utility poles The company operated in this capacity from 1930 - 1970 The sites ground surface consists of soil, grass, weeds, asphalt, gravel and concrete Until 1972 the site contained a treatment building, 6 pressure treatment cylinders, a tank farm for storage of creosote, Pentachlorophenol (PCP) and copper-chromium-arsenic (CCA), a pump house, mechanical shop and a storage building At that time all were demolished and removed from the site except the storage building which is still standing

The site is located at 9200 W Fullerton Ave , Franklin Park, Illinois in Cook County (Figure 1) The parcel of land which was occupied by Joslyn consists of approximately 30 acres in the SE 1/4 of the SW 1/4 of Section 27, Township 40 North - Range 12 East (Figure 2)

The site is owned and operated by Joslyn Manufacturing Company which no longer treats wood, however, Joslyn's lightning arrester manufacturing division still occupies the southeast corner of the property The original wood treating facility began in the late 1920's and was located in the

northwestern corner of the site (Figure 3) During that time the wood treating preservatives were stored in sumps located in the mechanical shop In 1946 a new treatment facility was built along the eastern portion of the site This facility consisted of six pressure treatment cylinders, a tank farm, a pump house and a treatment building Treatment of wood consisted of bringing lumber in on rail cars along narrow gauge tracks and placing it in one of the six pressure cylinders After treatment, the rail cars were pulled approximately 150 feet west of the treatment building and allowed to dry The cars were then pulled south along a common track about 100 feet where the lumber was unloaded and stacked along the west end of the property

The southern section of the site near Fullerton Ave was originally a swampy area, in the 1940's Over the years this area was gradually filled with construction debris and used as a disposal area for other on-site generated wastes

A Remedial Investigation (RI) and Removal Action has been performed at the Joslyn Manufacturing Company site in Franklin Park, Illinois

The RI was performed by Warzyn Engineering Inc in accordance with the December 1986 Illinois Environmental Protection Agency (IEPA) Record of Decision (ROD) The ROD was based on a subsurface investigation by Terra Testing, Inc in April

1986 and a site visit, also in April 1986, by IEPA Remedial Project Management Section personnel The ROD required the RI to be performed in two phases Phase I included installation of a minimum of three groundwater monitoring wells and 15 soil borings for sampling Phase II included performing a hydrogeologic study of the site

The 1986 subsurface investigation, conducted by Terra Testing, was limited to the area of the 1946-1975 wood treating facility and an area approximately 700 feet to the west Ten soil borings were drilled to a depth of approximately 10 feet below ground surface Soil samples were collected at that depth and analyzed for creosote constituents and PCP The results from seven of the samples were reported to be below 50 parts per million (ppm) for creosote and 20 ppm for PCP Analytical results from the other three samples, located near the wood treating facility, indicated the presence of creosote ranging from 72 ppm to 8,700 ppm and PCP ranging from <20 ppm to 770 ppm

In October 1987, Warzyn performed a subsurface assessment of the areas not included in the Terra investigation Approximately 75 soil borings were drilled and 5 pits were excavated Split spoon samples were collected from 14 borings and grab samples were collected from the pits All samples were analyzed for creosote and pentachlorophenol Results of the sampling indicated that the site was relatively clean

(results ranging from no contamination detected to approximately 30 ppm total hydrocarbon contamination) in the northern, western and central sections Areas where contaminants were most prevalent were in the former location of the tank farm and new wood treatment facility, in the eastern section of the site, and the fill area in the southern section of the site Creosote concentrations detected in visually contaminated soils ranged from 2,700 ppm to 35,000 ppm in the tank farm and 35 ppm to 14,000 ppm in the southern section The pentachlorophenol concentrations ranged from 1 2 ppm to 6 2 ppm in the southern section No pentachlorophenol was detected in samples collected from the tank farm

The Remedial Investigation for the site was performed by Warzyn Engineering during 1988, pursuant to the IEPA ROD The RI included the installation of 9 monitor wells, 4 deep borings (40-50 feet deep) and 19 shallow borings (approximately 20 feet deep) The 9 monitor wells and 35 soil samples (taken from the borings noted) were analyzed for volatiles and semivolatiles (See Tables 1,2 & 3)

Water levels from the nine groundwater monitoring wells showed a water table at approximately 20 feet below grade Groundwater flow patterns could not be established due to inconsistent horizontal gradients across the site The wells used 10 foot stainless steel screens and ranged from 12 5 to

35 4 feet deep Five of the nine wells indicated the presents of PNAs and three of the five showed VOCs VOCs ranged from 0 0005 (estimated) to 0 069 ppm while PNAs ranged from 0 00001 (estimated) to 1 4 ppm

Based on the analysis of samples throughout the RI process and the vertical and horizontal extent from which they were collected 5 main areas of contamination were defined

Area 1 - An apparent fill area in the southwest corner of the site (Approximate depth of creosote saturation from the surface was 1 - 3 feet)

Area 2 - An apparent fill area in the southeast corner of the site (Approximate depth of creosote saturation from the surface was 1 - 3 feet)

Area 3 - An area along the west-central boundary of the site (Approximate depth of creosote saturation from the surface was 1 foot)

Area 4 - The 1946-1970 wood treating area along the eastern boundary of the site (Approximate depth of creosote saturation from the surface was 6 - 10 feet)

Area 5 - The 1930-1945 wood treating area in the northwestern corner of the site (Approximate depth of creosote saturation was 3 - 8 5 feet)

The approximate locations of the above mentioned areas are shown in Figure 4

Removal of contaminated soil from the Joslyn facility was performed by Waste processor Industries, Inc from October through December 1989 The work was performed under the direct supervision of a Joslyn representative with supplemental oversight provided by ERM-Northcentral and ERM-Southwest All site activities were performed in accordance

with the Illinois EPA approved Work Plan for the Removal Action of Contaminated Soils, dated August 17, 1989 (revised October 20, 1989) Reference Figure 5 for the approximate locations and extent of soil removal

Contaminated soil was excavated from the site using a track mounted backhoe and loaded into twelve cubic yard dump trucks The trucks then transported the soil to a material stockpile area on site This area was surrounded by a 12 inch high berm and lined with a 40-mil plastic liner Soil was transferred from the stockpile, using a front-end loader, to cleaned, plastic lined railcars (each car holding approximately 90 tons) and transported to Wynoka, Oklahoma for disposal at the United States Pollution Control, Inc Lone Mountain Facility (a permitted, secure hazardous waste disposal facility) The removal action excavated 25,672 tons of contaminated soil at the site Perimeter samples were taken from around each excavation to assure contamination was removed The excavated areas were then backfilled and regraded with soil which was primarily brought in from an off-site location

According to Illinois State Water Survey well logs within one mile of the site, the area is underlain by 50 to 70 feet of till which consists of silty clays, clayey silts and occasional sand and gravel lenses Six of the eight recorded wells are deeper than 1000 feet while an abandoned 267 foot

deep well is located on the Joslyn site and an 84 foot well is located east of the Des Plaines River Regional hydrogeology data suggests the top 10 to 30 feet of the bedrock is unsaturated because of dewatering by local quarry operations Four Bellwood public wells exist from 2 to 3 miles of the site, but these wells are over 1900 feet deep in a sandstone aquifer

There are several surface water bodies near the site The Des Plaines River is about one-half mile to the east of the site and Silver Creek is one-half mile to the west A drainage ditch runs between the Soo Line Railroad tracks immediately to the east of Joslyn and the Joslyn property No surface water intakes for public water supplies exist within 15 miles of the site The population within a mile of the site is estimated at 1000 people while the population within four miles is greater than 10,000

Reconnaissance visits conducted on October 18 and November 10, 1988 noted that the site was not completely sealed, however a fence was in the process of being erected around the perimeter During the January 1991 reconnaissance visit it was noted that the entire facility was surrounded by fencing and was, for the most part, intact Several portions of the eastern fence (wood boards plus chain link) had been broken out and cut near the bottom by vandals This activity was indicated by the site representative to happen on a

regular basis The fence is subsequently repaired after each occurrence

Based on the removal activities and contaminant free samples collected after the removal, the author recommends that the site be given a No Further Remedial Action Planned (NFRAP) rating

BIBLIOGRAPHY

ERM-Southwest, Inc , January 1991, Removal Action Report for the Former Joslyn Wood Treating Facility, Franklin Park, Illinois

Grabinski, Carl, 1991, Joslyn Corporation, Environmental Attorney

Illinois Environmental Protection Agency, 1989, Potential Hazardous Waste Site Preliminary Assessment for Joslyn Manufacturing Company, ILD077054708, prepared by Timothy J Murphy, Springfield, Illinois

Illinois State Geological Survey, Bulletin 95, Handbook of Illinois Stratigraphy.

Terra Testing, Inc , April 1986, Report of Subsurface Soil Investigation for Joslyn Manufacturing Company

U S Geological Survey, 1963, revised 1972 & 1980, Berwyn Quadrangle, 7 5 Minute Series 1 24,000

U S Geological Survey, 1963, revised 1972 & 1980, Elmhurst Quadrangle, 7 5 Minute Series 1 24,000

U S Geological Survey, 1963, revised 1972 & 1980, Hinsdale Quadrangle, 7 5 Minute Series 1 24,000

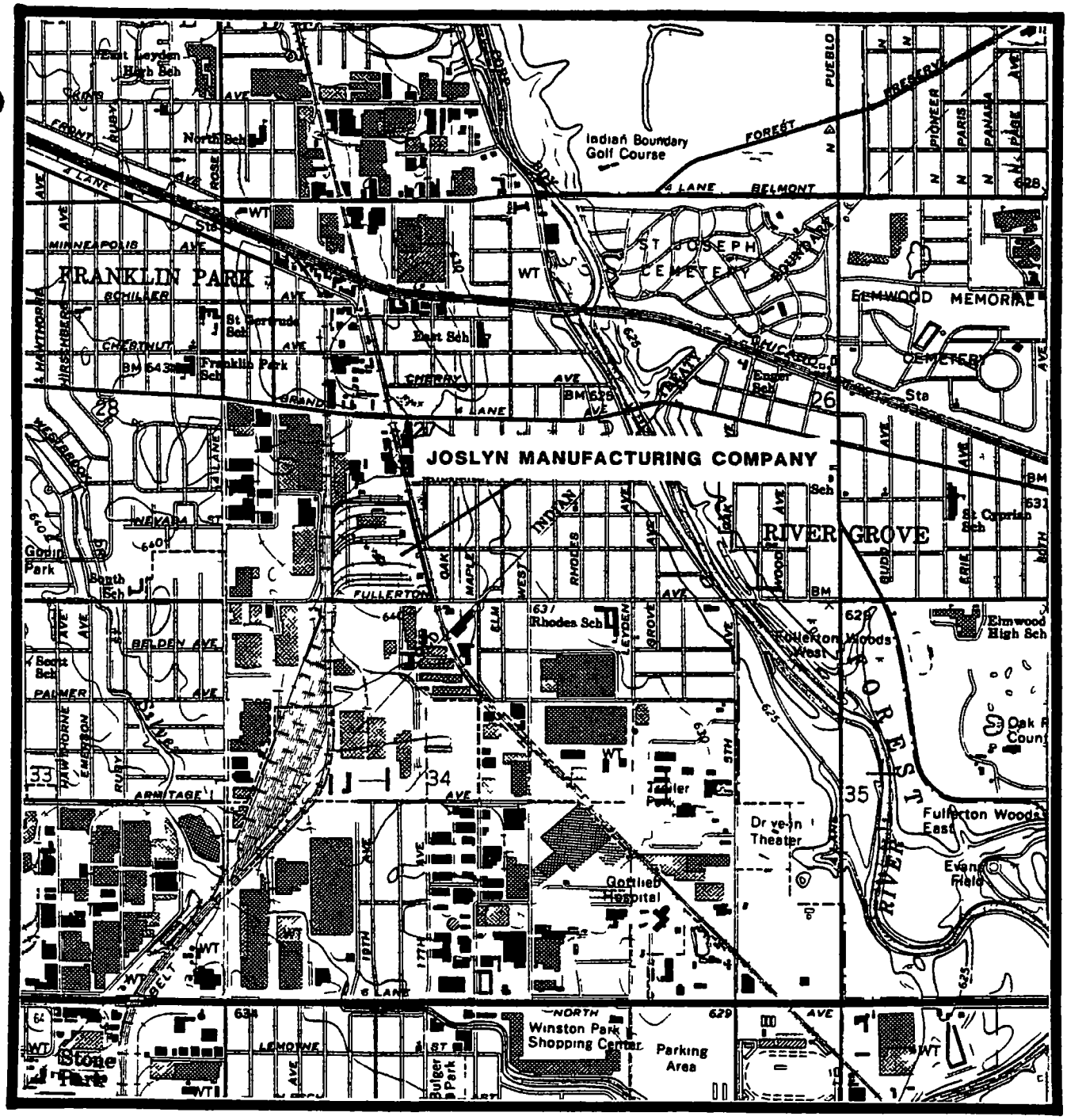
U S Geological Survey, 1963, revised 1972, River Forest Quadrangle, 7 5 Minute Series 1 24,000

Warzyn Engineering, Inc , February 1989, Joslyn Remedial Investigation for Joslyn Manufacturing Company

JOSLYN MANUFACTURING COMPANY

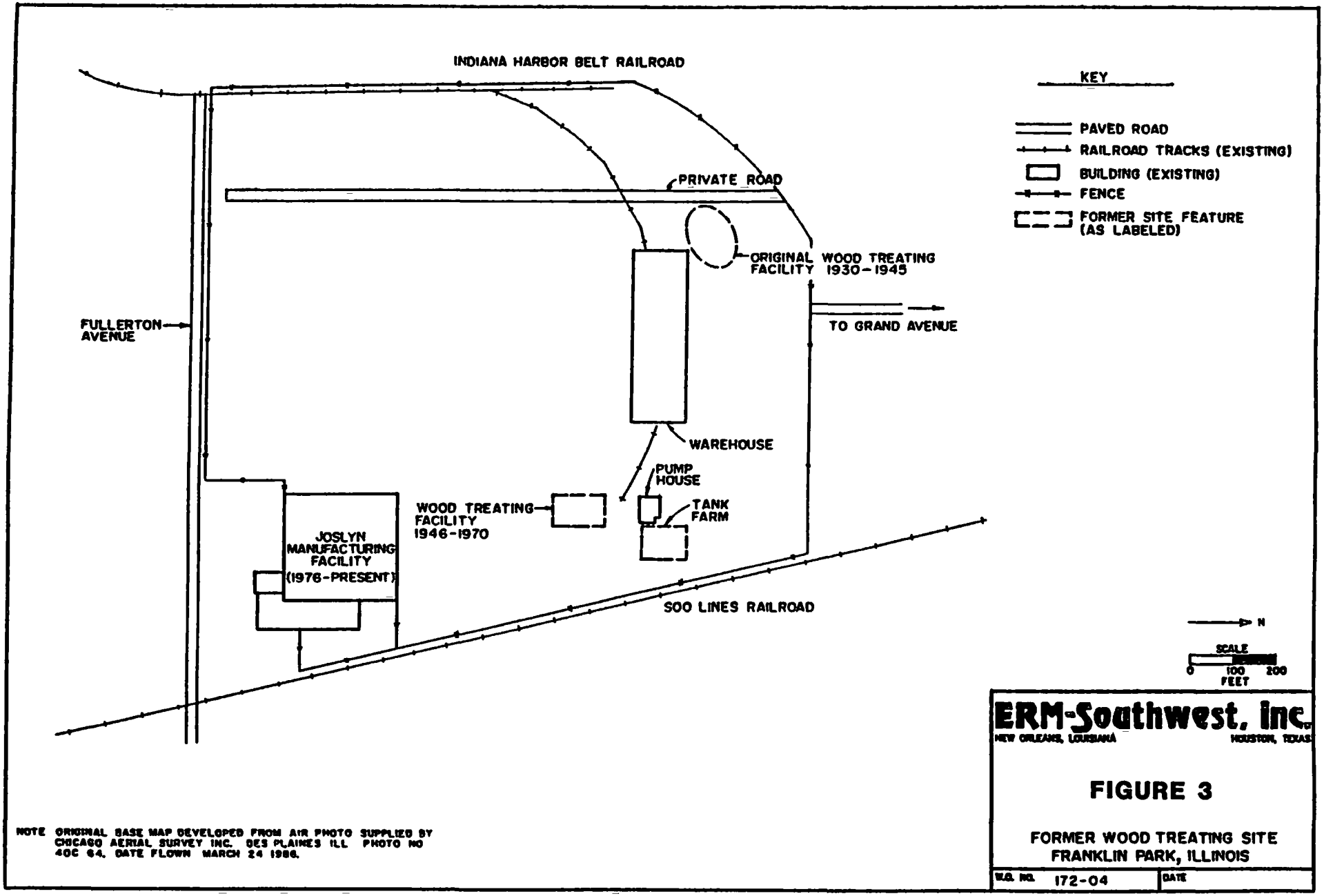
SITE LOCATION

FIGURE 1



SITE MAP

FIGURE 2



NOTE ORIGINAL BASE MAP DEVELOPED FROM AIR PHOTO SUPPLIED BY CHICAGO AERIAL SURVEY INC. DES PLAINES ILL PHOTO NO 40C 64. DATE FLOWN MARCH 24 1986.

ERM-Southwest, Inc.
NEW ORLEANS, LOUISIANA HOUSTON, TEXAS

FIGURE 3

FORMER WOOD TREATING SITE
FRANKLIN PARK, ILLINOIS

W.O. NO. 172-04 DATE

Illinois Environmental Protection Agency

N

SITE NAME Joslyn Corporation

SITE ILD # 0770547008

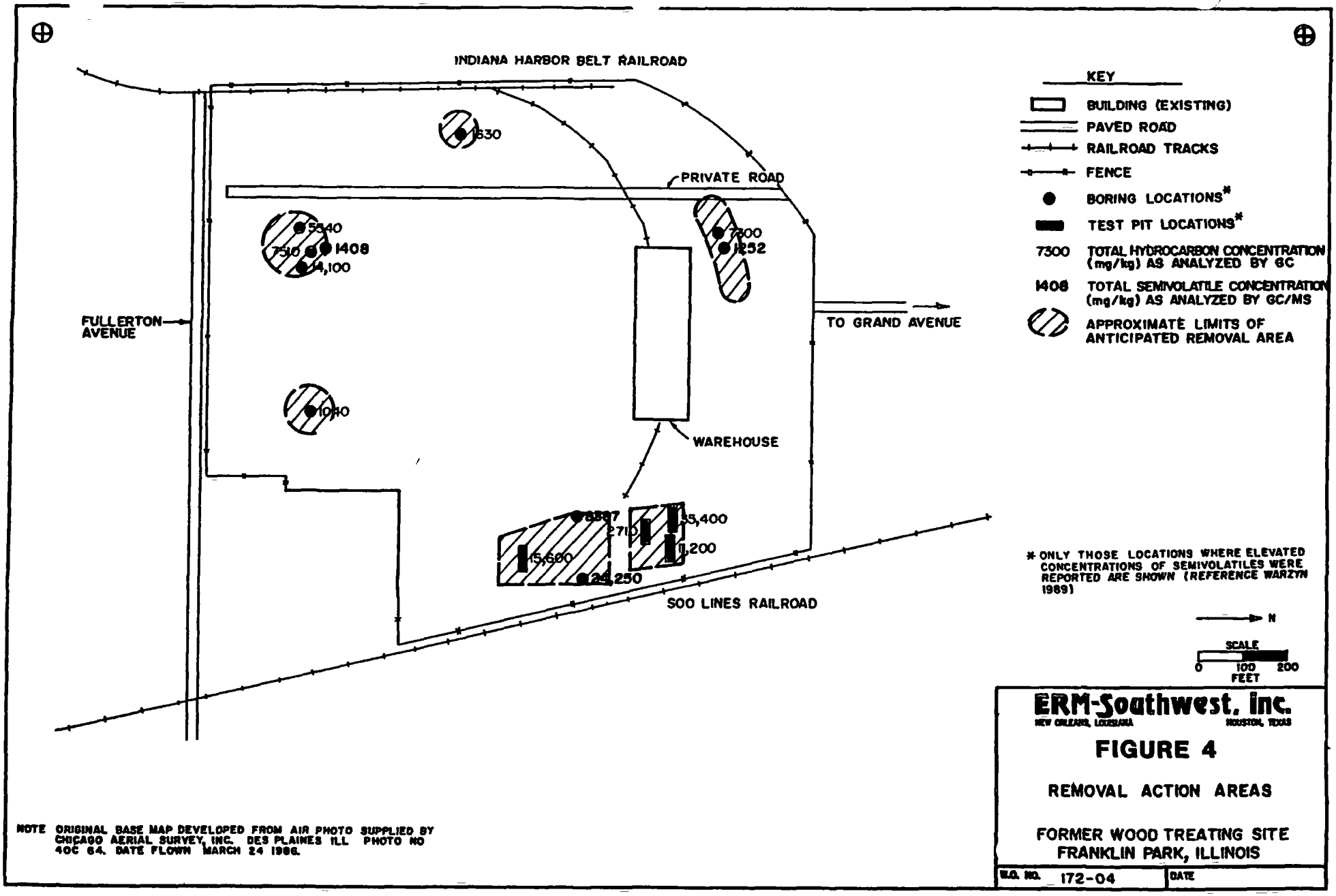
USGS TOPOGRAPHIC MAPS

NAME Elmhurst, IL 32B	NAME River Forest, IL 32A
DATE 1963	DATE 1963
REVISED 1972, 1980	REVISED 1972
NAME Hinsdale, IL 32C	NAME Berwyn, IL 32D
DATE 1963	DATE 1963
REVISED 1972, 1980	REVISED 1972, 1980

ILLINOIS

QUADRANGLE LOCATION

MAP SCALE: 1 0 1 mile



NOTE ORIGINAL BASE MAP DEVELOPED FROM AIR PHOTO SUPPLIED BY CHICAGO AERIAL SURVEY, INC. DES PLAINES ILL PHOTO NO 40C 64. DATE FLOWN MARCH 24 1986.

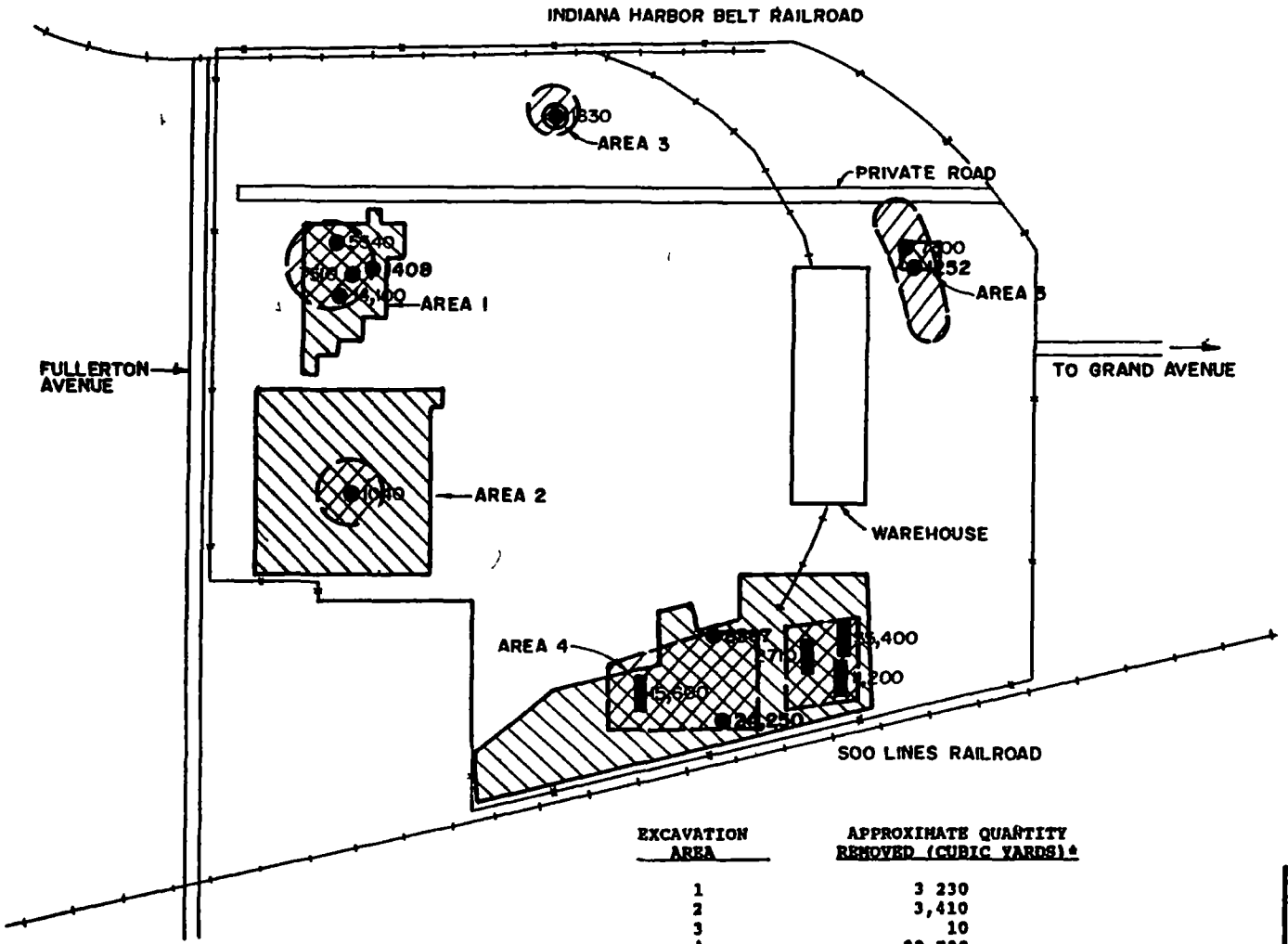
ERM-Southwest, Inc.
NEW ORLEANS, LOUISIANA HOUSTON, TEXAS

FIGURE 4

REMOVAL ACTION AREAS

FORMER WOOD TREATING SITE
FRANKLIN PARK, ILLINOIS

W.O. NO. 172-04	DATE



KEY

- BUILDING (EXISTING)
- PAVED ROAD
- RAILROAD TRACKS
- FENCE
- BORING LOCATIONS*
- TEST PIT LOCATIONS*
- 7300 TOTAL HYDROCARBON CONCENTRATION (mg/kg) AS ANALYZED BY GC
- 1408 TOTAL SEMIVOLATILE CONCENTRATION (mg/kg) AS ANALYZED BY GC/MS
- APPROXIMATE LIMITS OF ANTICIPATED REMOVAL AREA
- APPROXIMATE LIMITS OF ACTUAL REMOVAL AREA

* ONLY THOSE LOCATIONS WHERE ELEVATED CONCENTRATIONS OF SEMIVOLATILES WERE REPORTED ARE SHOWN (REFERENCE WARZYN 1989)

N

SCALE 0 100 200 FEET

EXCAVATION AREA	APPROXIMATE QUANTITY REMOVED (CUBIC YARDS)*
1	3 230
2	3,410
3	10
4	22,730
5	420
TOTAL	29,800

*Quantities based on number of truckloads removed, further details in Table 3-1

NOTE: ORIGINAL BASE MAP DEVELOPED FROM AIR PHOTO SUPPLIED BY CHICAGO AERIAL SURVEY, INC. DES PLAINES ILL. PHOTO NO 40C-64. DATE FLOWN MARCH 24 1966.

ERM-Southwest, inc.
NEW ORLEANS, LOUISIANA HOUSTON, TEXAS

FIGURE 5
REMOVAL ACTION AREAS

FORMER WOOD TREATING SITE
FRANKLIN PARK, ILLINOIS

W.O. NO. 172-04 DATE

TABLE 1

REPRESENTATIVE GROUND WATER CONDITIONS
JOSLYN MANUFACTURING COMPANY FRANKLIN PARK ILLINOIS SITE
JUNE 2 1988
(ALL RESULTS IN mg/l)

LOCATION	MW 01	MW 02	MW 03	MW 04	MW 05	MW 06	MW 07	MW 08	MW 09
Volatiles(1)	0 132	ND	ND	ND	0 139	ND	ND	ND	ND
Pentachlorophenol	0 086	ND	ND	ND	1 4	ND	ND	0 11	ND
Semivolatiles(2)	0 956	ND	ND	ND	1 788	ND	ND	0 11	0 11

ND = Not Detected at specified detection limits

(1) = Volatiles detected include benzene ethyl benzene toluene styrene and xylenes

(2) = Semivolatiles detected include Naphthalene 2 methylnaphthalene acenaphthene dibenzofuran fluorene phenanthrene anthracene, fluoranthene, and pyrene

TABLE 2

SUMMARY OF SOIL GC/MS VOLATILE DATA
REMEDIAL INVESTIGATION

Former Wood Treating Site
Franklin Park, Illinois

Boring	SS 01	SS 01	SS 01	SS 01	SS 01	SB 02	SB03A	SB 04	SB 05	SB 06	SB 07	SB 08	SB 10	SB 11
Depth (ft)	2	4	10	15	20	2 4	4 6	0 2	34 36	4 6	4 6	2 4	2 4	19 21
Concentrations in mg/kg														
Methylene Chloride	0 014B	0 005B	0 035B	0 018B	0 010B	0 021B		0 013B	0 021B	0 008B	0 03B	0 083B	0 046B	0 023B
Acetone	0 31B	0 09B	0 20B	0 20B	0 054B	0 13B	3 8B	0 032B	0 071B	0 22B	0 025B	0 20B	0 89B	0 039B
Chloroform	0 010B		0 022B	0 018B	0 007B									
Carbon Disulfide									0 010					
2 Butanone										0 015				
1 1,1 Trichloroethane											0 014			
Trichloroethylene	0 009		0 076	0 038										
Benzene			0 068	0 052			2 5							
Toluene	0 010B	0 005	0 31B	0 14B			18							
Ethylbenzene		0 056	1 5	0 34			53							
Styrene	0 009	0 056	1 5	0 31			29							
Total Xylenes							73	0 011		0 012				

NOTES

Blank indicates constituents was not reported above the detection limit
B indicates constituent was detected in sample blank

Source Joslyn Remedial Investigation, Franklin Park Illinois,
Warzyn Engineering Inc , February 1989

TABLE 2 (CONT)

SUMMARY OF SOIL GC/MS VOLATILE DATA
REMEDIAL INVESTIGATION

Former Wood Treating Site
Franklin Park, Illinois

Boring	SB 12	SB 13	SB 14	SB 15	SB 16	SB 17	SB 18	SB 19	SB 19D	SB 20	SB 20D	SB 21	SB 22	SB 23
Depth (ft)	2 4	0 2	19 21	0 2	0 2	0 2	0 2	0 2	0 2	19 21	19 21	0 2	0 2	0 2
Concentrations in mg/kg														
Methylene Chloride		0 033B	0 028	0 009	0 012	0 022	0 013	0 007		0 055B	0 062B	0 011	0 015	0 008
Acetone	8 1B	0 031B	0 066B	0 045		0 022		0 069	0 057B	0 15B	0 12B	0 0298	0 044B	0 021B
Chloroform														
Carbon Disulfide														
2 Butanone								0 014						
1,1,1 Trichloroethane							0 006					0 008		
Trichloroethylene														
Benzene														
Toluene	2 7				0 0068							0 008	0 021	
Ethylbenzene	4 6												0 067	
Styrene														
Total Xylenes	15				0 009							0 007	0 11	

NOTES

Blank indicates constituents was not reported above the detection limit
B indicates constituent was detected in sample blank

Source: Joslyn Remedial Investigation, Franklin Park Illinois,
Warzyn Engineering Inc , February 1989

TABLE 3

SUMMARY OF GC/MS SEMIVOLATILE DATA
REMEDIAL INVESTIGATION

Former Wood Treating Site
Franklin Park, Illinois

Boring	SS 01	SS 01	SS 01	SS 01	SS 01	SB 02	SB03A	SB 04	SB 05	SB 06	SB 07	SB 08	SB 10	SB 11
Depth (ft)	2	4	10	15	20	2 4	4 6	0 2	34 36	4 6	4 6	2 4	2 4	19 21
Concentrations in mg/kg														
Naphthalene		3 7	3 6	2 7	4 9									
2 Methylnaphthalene							1,400							
Acenaphthylene														
Acenaphthene		3 2		2 0	2 2		1 200	0 62		160				
Dibenzofuran							710			120				
Dibenzo(a,h)anthracene														
Fluorene		1 7		1 6	1 5		660			150				
Pentachlorophenol	510	10	5 8	5 8	4 8		250				37			
Phenanthrene		5 9		7 6	5 2		2 000	0 80		480	1 5			
Anthracene				1 4	0 74		330							
DI N Butylphthalate						2 7		1 4	1 2					0 56
Fluoranthene	310	6 0		5 1	1 7		920	2 4		130	1 5	0 47		
Pyrene	380	6 5	0 35	4 9	1 7		490	2 9		98	1 8	0 44		
Benzo(a)anthracene				1 1	0 28		260	0 49		21				
Bis(2 Ethylhexyl)phthalate								4 8	6 5			4 7		4 08
Chrysene		1 5		1 3			110	0 65						
Benzo(b)fluoranthene								0 52				0 48		
Benzo(k)fluoranthene				0 45										
Benzo(a)pyrene		0 34												
Indeno(1 2 3 cd)pyrene														
Benzo(g,h,i)perylene														

NOTES
Blank indicates constituents was not reported above the detection limit
B indicates constituent was detected in sample blank

Source Joslyn Remedial Investigation Franklin Park Illinois
Warzyn Engineering Inc February 1989

TABLE 3 (CONT)

SUMMARY OF SOIL GC/MS SEMIVOLATILE DATA
REMEDIAL INVESTIGATION

Former Wood Treating Site
Franklin Park, Illinois

Boring	SB 12	SB 13	SB 14	SB 15	SB 16	SB 17	SB 18	SB 19	SB 190	SB 20	SB 200	SB 21	SB 22	SB 23
Depth (ft)	2 4	0 2	19 21	0 2	0 2	0 2	0 2	0 2	0 2	19 21	19 21	0 2	0 2	0 2
Concentrations in mg/kg														
Naphthalene	4 200	4 5												
2 Methylnaphthalene	1,200													
Acenaphthylene					0 44									
Acenaphthene	1 800													
Dibenzofuran	1 200													
Dibenzo(a,h)anthracene							0 41							
Fluorene														
Pentachlorophenol				69	6 9	4 3						4 1		
Phenanthrene	7,000			3 1	0 36		0 46							
Anthracene	2 100				1 1	0 69						0 57		
Di N Butylphthalate		5 0	4 6	5 0										
Fluoranthene	3,500			68	1 2	0 95	0 76					0 78		
Pyrene	2,100			55	1 5	0 71	0 68	0 44				0 75		
Benzo(a)anthracene	390			9 9	0 57		0 56							
Bis(2 Ethylhexyl)phthalate		1 2B	2 8B		1 7B	1 5B				1 4B	0 68B	1 3B		
Chrysene	760			15		0 55	0 70							
Benzo(b)fluoranthene				18	3 1	3 1	2 1		0 72			1 6		
Benzo(k)fluoranthene						1 5								
Benzo(a)pyrene				5 5	0 87	0 42	0 98					0 65		
Indeno(1 2 3 cd)pyrene				6 8		1 2	1 3	0 54	0 36			1 3		
Benzo(g,h,i)perylene				4 7	1 9	1 0	1 0					1 0		

NOTES
Blank indicates constituents was not reported above the detection limit
B indicates constituent was detected in sample blank

Source: Joslyn Remedial Investigation Franklin Park Illinois
FEB 1989